

For Immediate Release

For Additional Information
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March 3, 1980 (Atlanta, GA) Amy D. Wohl and Howard Lee Morgan have announced the publication of Advanced Office Concepts, a newsletter covering the office automation field. Advanced Office Concepts will include articles on research projects and their business application, new office automation products and their potential usefulness, discussions of office automation concepts and techniques and lively commentary on this rapidly growing market.

Wohl, an authority on office automation and a noted speaker, writer, and consultant, feels that, "Advanced Office Concepts approaches this market from a new angle. It will bring new technologies and new uses for technology to the attention of systems designers and end users. In a field where information is sometimes fragmented and scarce, it will help speed up the absorption of viable technologies and genuinely useful business products."

Morgan, an expert an office automation and professor at the Wharton School of the University of Pennsylvania, will be in charge of the newsletter's efforts to report on research projects and to analyze their potential commercial applications.

The monthly publication will feature feature three special supplements each year, aimed at taking an in-depth look at the office automation market and its users and at various specific technologies.

Subscription price for Advanced Office Concepts is \$95 per year. A special \$60 price is available to charter subscribers through May 1. For additional information contact Advanced Office Concepts at 354 West Lancaster Avenue, Suite 214, Haverford, PA 19041. Telephone (215) 649-7310.

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Advanced Office Concepts

Amy D. Wohl, Editor

Howard L. Morgan, Contributing Editor

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Advanced Office Concepts (or Concepts, as we shall call it hereafter) is designed to fill a certain void in the information now available about the progress of office automation. Starting with this charter issue, we shall attempt to do four things:

- To report on new products and concepts, not only for their own sake, but as a reflection of the changing face of office automation. We shall always try to place these new products and ideas within the environment of today's office and to predict their potential effect on the offices of tomorrow.
- To bring you reports on office automation projects from the academic and commercial research communities. Such information is, at best, scarce and is generally not available to users and planners. By our comments on the potential business applications for such new ideas, we hope to have a genuine impact on the rate of absorption of viable new technologies. To this end, we invite our readers to bring projects of possible interest to our attention. Dr. Howard Lee Morgan, Professor of Decision Sciences at the Wharton School of the University of Pennsylvania will be actively involved in this section of Concepts as a Contributing Editor. His keen insights into the future of office automation should provide valuable information to our readers.
- Our comments on events of note among the office automation industry's players. We shall try to describe corporate personalities, point out new and continuing strategies and generally keep you abreast of vendor and regulatory activities that should be a part of your office automation plans.
- Three or more times each year, your copy of Concepts will be accompanied by a Special Supplement, covering in depth a topic of particular interest to office automation users. These supplements will include a special survey of office automation users' plans for future equipment acquisitions and of their satisfaction with their currently installed systems. Other Special Supplements will cover specific technologies, specific management problems in planning for and implementing office automation, and

surveys of available products and services. These Special Supplements are included in the price of your subscription.

We feel that this newsletter represents a special opportunity to bring exciting projects, products, and concepts to the attention of users who are ready to take the next steps toward office automation. For consultants, manufacturers, and planners, Concepts will provide an overview of the office automation industry from a new perspective. By both pointing our readership to the future and, simultaneously, surveying its success with these new concepts and technologies, Concepts can provide a valuable service to the office automation community. We invite you to participate with us in an exciting and challenging new world!

AMY D. WOHL, Editor

THE USER INTERFACE: MULTI-MEDIA STYLE

More complaints are voiced over user interfaces than almost any other part of automated office systems. The elusive qualities of "friendliness" and "understanding" which humans can provide are missing from most systems. Until they are a routine part of these systems, managers and clerical personnel alike will continue to complain. A research project underway at MIT's Center for Advanced Visual Studies may help to change this situation. The "Spatial Data Management System", developed by Professor Nicholas Negroponte and his colleagues and sponsored by the Defense Advanced Research Projects Agency and the Office of Naval Research, provides a working prototype of an integrated user interface for the office of the future.

Point to a spot on the wall (actually computer output displayed by a GE Light Valve projector), and say "Show me my calendar for Tuesday." In an instant, a page from a diary appears on the wall, at the place indicated. Say, "Next Wednesday.", and it is replaced

by the corresponding page for the following Wednesday. Say "Show me the file on ITI" and a file folder appears. Move a cursor located in the arm of the chair in which you are sitting, and the folder disappears, to be replaced by a more detailed table of contents of what is in the folder. Move the cursor to the line containing "Howard Morgan," and the screen changes to show a photo of Morgan, along with a few lines of information about him.

The naturalness of using speech, computer graphics input and output devices, and pointing all contribute to an extremely easy to learn system. Most users can understand how to browse the available database in less than a minute, according to project researchers. The speech recognition currently works only on speakers who have trained the system. It utilizes the NEC continuous speech recognizer. Such devices can recognize connected utterances, as opposed to earlier (and less expensive devices), which require a stilted form of speech, with each word spoken separately and recognized separately.

The integration of multiple media, e.g. pointing and speaking, enables the system to overcome some of the trickier problems still under study in understanding English. For example, the demonstrative pronouns "here, there, that", are all easily understood through reference to where the person is pointing. The finger following is performed by placing a small (less than 1 cm.) cube on the wrist. A larger cube located in the room senses the 3-D position of the smaller cube, and a microcomputer analyzes this data and lets the main system know where you are aiming.

There are still a number of drawbacks. The bottleneck of getting a large enough database entered and accessible remains. Even though high quality visual images can be shown (through the use of videodisc storage), a disk containing 54,000 slides has fewer than 10,000 of the images indexed for easy computer retrieval. And while certain database display concepts evidenced in the system work well with small databases, they do not scale up in any obvious manner for handling the very large databases which we often encounter in business operations. All these are topics of other, related research projects.

Don't expect to see the entire system in your office just yet. The research project version would cost close to a million dollars to duplicate in its entirety. Some of the concepts and results gained from this research, however, are already beginning to feed into our notions of how to design systems. Limiting ourselves to a keyboard for all the entry into the system is like trying to converse with your friends only through writing notes. It can be done, but is slow and painful. Concepts will keep you posted on the changes in cost and feasibility of providing multi-media user interfaces, and of their integration into commercial products.

IBM ANNOUNCES PROFESSIONAL EDITOR

IBM has announced the availability of a Field Developed Program that permits a special version of a Series I keyboard/display to be used as a text editor. The unique double keyboard offers the user a standard QWERTY keyboard plus individual function keys (over 50), permitting system users to create and edit copy with a minimum of training. Designed for professional writers in the media industry (public relations firms, copywriters, advertising departments, newspaper and magazine writers), the system permits text from up to four documents to be displayed simultaneously by windowing the screen (splitting it into four mini-screens). Up to 20 different documents can be stored by an individual user. This feature permits the writer to view different versions of the same story (for rewriting) or the viewing of reference documents. The system permits such normal editing functions as move, copy, insert, delete, replace, save, and single or global replacement. Some formatting is available on the screen, but formatting is intended to be provided during printout. The system can perform printout on the IBM 6670 copier-printer or output can be communicated to a 370, 303x, or 4300 mainframe for formatting via Printext, Script, or other appropriate software and output on the 1403 or 3800 printer. Output to photocomposition is also available. The display permits the user to design character sets (of up to 256 characters). The entire system is programmable, and available functions can be assigned to any key for user convenience. A Series I with the EDX operating system permits the user to perform text editing on some terminals and other functions (data entry, data processing) simultaneously on other terminals. A Series I with five work stations and system printer, disk and diskette storage is priced at \$65,750, including EDX multi-function operating system and text editing software.

Readers should look for more and more vendors to offer general and specialized text editing facilities on their multi-function data processing systems. Eventually, a mini or microcomputer will be considered incomplete without such software. While this IBM announcement is not exactly word processing—in that it is designed to provide the professional author with a useful "writing" terminal—it clearly is an important step toward providing multifunctional systems.

WHAT DO WE WANT?

Shoppers in the office automation marketplace find a bewildering number of choices confronting them. Originally, all of these choices dealt with picking the best piece of equipment for a particular job. So the prospective user would sort through piles of literature,

listen to dozens of demonstrations, and then throw a semi-educated dart to pick a product. Almost no one had educated darts because acquiring complete information on a product choice with dozens of potential suppliers just cost too much in time (and, therefore, in money). Often the user would later discover that another product would have done the job better or cheaper or faster. Or that the seven different departments that were by now using seven different (and non-compatible) products to do their chores were now going to be reorganized into four departments — and what do we do now?

The problem is we have always been purchasers of office equipment (and, til now, that has meant largely word processing equipment plus copiers, typewriters, telephone systems and the rest of the discrete pieces that make up an office in 1980). What we need to become is educated consumers of office automation. There are some things we will need to do to prepare for this new challenge:

- Learn what you are doing in your office now and what equipment you have on hand to aid these tasks. This defines your current environment.
- Define what tasks you would like to do that you cannot perform now because of equipment or personnel limitations. And try to predict the tasks you will need to do in the near future in order to provide services to your firm as its needs change and grow. This defines the additional capabilities you require.
- Look at the products in the current marketplace and see how they might fit your needs. Become educated in the types of products that are available and the personalities of the vendors who provide these products. Note that providing a good product is only part of the job; you will also need reliable service and adequate applications support.
- Define the features or products you need which are not currently available in the commercial market. Make those needs known to the vendors you would like to do business with. Future products are not dreamed up in isolated ivory towers (although some of the current products certainly look as though no one in the real world ever looked at them!) and your input can influence the design of future products.
- Keep an eye (and an ear) out for news of newly developed products that might fit into your plans. Too many firms make an inflexible plan and fail to update it as new products become available.
- Learn about the disciplines that relate to the office. If you're the word processing expert learn about communications and data processing. If you're the dp expert, learn about how offices work.

Now you're ready to make intelligent decisions. If you've already gone through most or all of the steps above (and some hard working few of you have ad-

vanced that far), it is time to know what you want. For comparison purposes, here is a Concepts version of what office automation managers are looking for:

- We will assume you already have some word processing equipment (because we think you do) plus the normal complement of office equipment. Now you want to start preparing for office automation — whatever that is — and you want to know how to do it.
- Try to get all the relevant people involved in the decisions that are going to come, because the systems you are looking for are going to include functions that will require cooperation from data processing and communications managers for full implementation. All of you are beginning to look at the whole problem of data processing. You will want some or all of the following: ability to do some limited data processing locally (probably within the work station being used as a word processor); ability to enter data into the computer and to access data from the computer (using that same work station).
- You are looking for systems that go way beyond text processing because all of us recognize that the big productivity gains in the office are going to come from the automation of administrative tasks. This means we are looking for systems that offer electronic mail, administrative support (calendar, scheduling, list maintenance, mail logs, travel reservations, etc.), and access to data of all kinds. An important aspect of these functions becoming available on office automation systems is the fact that non-keyboarding users will want to access such functions — and without learning how to type. Future issues of Concepts will look closely at the whole issue of administrative and managerial support and will compare the products that are currently available in the commercial marketplace to offer these functions. This will be a big growth area for office automation vendors over the next few years so you can expect lots of systems to choose from by the mid-eighties.
- You need to have a growth path to get from where you are right now to where we'll be in five years. And that requires various types of band-aids and glue until we get to the next generation of systems. Communications interfaces are one kind of glue. They let us stick on various types of peripheral devices (OCR, photocomposition, media interfaces). Compatible media (mag cards, diskettes) can offer another kind of interim glue. It's fine to design and use such interim systems as long as we understand that in the long run the goal is to sit at any terminal in any office (and nearly all of us will have such terminals) and to perform any function that is offered anywhere within the system. And that will be real information processing power!

NOTES AND FUTURES

- Late February (just after we go to press), the management work station project developed by Citibank and Lexar will become a commercial product, to be marketed by a new firm named Axxa. The multi-station product is likely to offer word processing plus access to corporate information resources, and some advanced office functions like electronic mail and calendaring. The product is also expected to offer such features as a full page display (with a new twist, literally, in that it swivels to accommodate wide pages), disk storage, and function keys designed to relate to office personnel. We'll offer you a full report next month.
- Pitney Bowes has acquired the Artec Corporation, a Palo Alto-based manufacturer of word processing systems. Pitney's Dictaphone group will market the Display 2000 and its big brother, the unique Dual Display (offering command information on its thin window display and full page text editing on a second display); manufacturing will remain in Palo Alto. Artec's biggest need for its well rated, but not well known, product line has been national marketing and intensive promotion, which Dictaphone should be in a good position to provide, so this marriage may truly be made in heaven.

FOR YOUR INFORMATION

This newsletter is prepared by keyboarding it on a dumb display terminal, attached via a telephone line to a time-shared computer service. All text and typesetting codes are input from the keyboard. The data is then recorded on computer tape and entered into the photocomposition system of our printer. We felt that if we are going to tell you about the office of the future, the least we can do is operate in the office of the very current!

For information on this publication and other ITI activities contact:



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